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14. (AMENDED) The article of manufacture of claim 13, wherein an appearance of the displayed second object on the monitor is modified when a type of the plug on the first object does not match a type of the socket on the second object.

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15. The article of manufacture of claim 13, wherein the step of automatically coupling further comprises the step of positioning the first object to align the plug of the first object to the created socket of the second object.

16. The article of manufacture of claim 13, wherein the step of automatically coupling further comprises the step of automatically coupling the attachment point of the second object to the first object along a defined range of the first object.

17. The article of manufacture of claim 13, further comprising deleting the created socket when the plug of the first object is no longer proximate to the second object.

18. The article of manufacture of claim 13, further comprising deleting the created socket when no plugs are attached to the created socket.

#### REMARKS

##### I. Introduction

In response to the Office Action dated September 10, 2002, claims 1, 2, 7, 8, 13, and 14 have been amended. Claims 1-18 remain in the application. Re-examination and re-consideration of the application, as amended, is requested.

II. III. Office Action Double Parenting Rejection

In paragraphs (4)-(5), the Office Action provisionally rejects claims 1-31 under the judicially-created doctrine of double patenting as being unpatentable over claims 1-42 of U.S. Patent no. 6,064,386.

The Applicants respectfully traverse all of these rejections. The present claims, as amended, provide for dynamically creating a socket when a plug is placed proximate to the object. Accordingly, a socket is dynamically created. However, the '386 patent does not provide for such dynamic socket creation. Instead, the '386 patent provides for creating/defining a socket which can then later be used. There is no suggestion nor description of the dynamic socket creation as set forth in the present specification and claims.

Nonetheless, should the Examiner continue to assert a double patenting rejection, Applicants may file a terminal disclaimer if necessary to moot this rejection when allowable subject matter is identified.

III. Non-Art Rejections

In paragraphs (6)-(7) of the Office Action, claims 2 and 5 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. Specifically, the Office Action indicates that claims 2 and 5 are omnibus type claims.

The Examiner indicated in a telephone message on December 10, 2002 that the rejection was based on the use of the word "substantially" in the claims. Applicants have amended claims 2, 8, and 14 to overcome this rejection by removing the word "substantially". However, the word "substantially" is not present in claim 5. Accordingly, Applicants traverse the rejection of claim 5 as being an omnibus type claim.

IV. Prior Art Rejections

In paragraphs (8)-(9) of the Office Action, claims 1-18 were rejected under 35 U.S.C. §102(b) as being anticipated by Arensault et al., U.S. Patent No. 5,894,310 "Intelligent Shapes for Authoring Three-Dimensional Models," (Arenault).

Specifically, independent claims 1, 7, and 13 were rejected as follows:

As per independent claim 1, a method of display information . . . comprising: displaying a first object . . . ; displaying a second object on the monitor; positioning the first object proximate to the second object . . . ; displaying plugs on the first object . . . plugs indicate one or more respective attachment points . . . ; creating a socket on the second object . . . socket indicates an attachment point between the first object and the second object; and automatically coupling the second object to the first object at the attachment point. Arsenault discloses modeling shapes and solids with intelligence and that intelligent shape modeling may include parameters specifying how the shape is to interact with other shapes, how the snap into place with other shapes and maintaining a certain distance with other shapes, col. 3. Arsenault further discloses a plug and socket configuration for the bus, however Arsenault also discloses a snap in and interlock capability, col. 4.

As per independent claims 7 and 13 and dependent claims 8-12 and 4-18, they are rejected based upon a similar rationale as above independent claim 1 and dependent claims 2 and 6 respectively.

Applicants traverse the above rejections for one or more of the following reasons:

- (1) Arsenault fails to teach, disclose or suggest dynamically creating a socket; and
- (2) Arsenault fails to teach, disclose or suggest creating a socket when a plug of a first object is placed proximate to a second object.

Independent claims 1, 7, and 13 are generally directed to the dynamic creation of a socket. Specifically, two objects are displayed on a monitor. A first object is then placed proximate to a second object. When the first object is positioned proximate to the second object, a plug on the first object is displayed. Further, when the plug on the first object is placed proximate to the second object, a socket is dynamically created. In other words, a socket, that was not on the second shape prior to proximate placement, is created once a plug is moved near the shape. Thereafter, the second object and first object are automatically coupled at the attachment point (i.e., at the location of the plug and socket). Accordingly, the socket is not predefined but is instead created dynamically when objects are moved near each other.

The cited references do not teach nor suggest these various elements of Applicants' independent claims.

The prior art, including Arsenault merely describes the use of predefined anchor points. Arsenault describes many predefined properties that are established and represented in a constructed solid geometry (CSG). A computer stores the object/properties of a CSG in a tree (see col. 9, lines 30-38). Arsenault's properties include the capability for an object to "snap onto" another object when it is dragged nearby (see col. 9, lines 59-67). In this regard, a property of Arsenault may define a center of an object as an "anchor" (see col. 9, line 67-col. 10, line 2). However, while Arsenault describes the dynamic behavior of a shape, such dynamic behavior merely provides for the use of

these properties on an object dynamically. In this regard, the dynamic behavior is not used in the creation of a socket on an object

Arsenault's properties are stored and described separately from this "dynamic" behavior (see col. 10, line 67-col. 11, line 11). As illustrated in col. 10, line 67-col. 11, line 11 of Arsenault, the "anchor" components and "attachment point components" are separately described while "other" components are specifically described as relating to "dynamic or static behavior of the shape". Further, Arsenault specifically provides that an "anchor" component is not changed (see col. 22, lines 11-13). Accordingly, Arsenault's dynamic behavior does not include the dynamic creation of a socket on an object.

In view of the above, Applicants submit that Arsenault lacks any discussion, implicit or explicit regarding the dynamic creation of a socket. Further, Arsenault fails to even remotely describe the creation of a socket when an object is moved proximately to another object. The timing aspect of when Arsenault's "attachment point" or "anchor point" is created is strictly limited to prior to object placement wherein the properties are set forth in a CSG tree. In this regard, the dynamic behavior of an object and "snapping" together of objects are an entirely different concept from the dynamic creation of a socket which can then be used in the dynamic behavior of an object. Thus, the predefining of an "anchor point" does not render obvious the dynamic creation of a socket as claimed. Also, Arsenault does not describe the creation of an "anchor" or "attachment point" when an object is move proximately to another object (as claimed).

Further, instead of teaching the above invention, Arsenault teaches away from Applicants' invention because it describes how anchor points do not change and are set forth in a CSG tree which are created prior to using an object.

Moreover, the various elements of Applicants' claimed invention together provide operational advantages over Arsenault. In addition, Applicants' invention solves problems not recognized by Arsenault.

Thus, Applicants submit that independent claims 1, 7, and 13 are allowable over Arsenault. Further, dependent claims 2-6, 8-12, and 14-18 are submitted to be allowable over Arsenault in the same manner, because they are dependent on independent claims 1, 7, and 13, respectively, and thus contain all the limitations of the independent claims. In addition, dependent claims 2-6, 8-12, and 14-18 recite additional novel elements not shown by Arsenault.

V. Conclusion

In view of the above, it is submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Applicants' undersigned attorney.

Respectfully submitted,

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## APPENDIX: VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. (AMENDED) A method of displaying information on a monitor attached to a computer, comprising:
  - (a) displaying a first object on the monitor;
  - (b) displaying a second object on the monitor;
  - (c) positioning the first object proximate to the second object on the monitor;
  - (d) displaying plugs on the first object when the first object is positioned proximate to the second object, wherein the plugs indicate one or more respective attachment points on the first object;
  - (e) dynamically creating a socket on the second object when the plug of the first object is placed proximate to the second object, wherein the socket indicates an attachment point between the first object and the second object; and
  - (f) automatically coupling the second object to the first object at the attachment point.
2. (AMENDED) The method of claim 1, wherein an appearance of the displayed second object on the monitor is modified when a type of the plug on the first object does not [substantially] match a type of the socket on the second object.
7. (AMENDED) A computer-implemented apparatus for displaying information, comprising:
  - a computer having a monitor attached thereto, wherein the monitor displays a first object and a second object;
  - means for positioning the first object proximate to the second object on the monitor;

means for displaying plugs on the first object when the first object is positioned proximate to the second object, wherein the plugs indicate one or more respective attachment points on the first object;

means for dynamically creating a socket on the second object when the plug of the first object is placed proximate to the second object, wherein the socket indicates an attachment point between the first object and the second object; and

means for automatically coupling the second object to the first object at the attachment point.

8. (AMENDED) The apparatus of claim 7, wherein an appearance of the displayed second object on the monitor is modified when a type of the plug on the first object does not [substantially] match a type of the socket on the second object.

13. (AMENDED) An article of manufacture comprising a computer program carrier readable by a computer and embodying one or more instructions executable by the computer to perform method steps of displaying information on a monitor attached to the computer, the method comprising the steps of:

- (a) displaying a first object on the monitor;
- (b) displaying a second object on the monitor;
- (c) positioning the first object proximate to the second object on the monitor;
- (d) displaying plugs on the first object when the first object is positioned proximate to the second object, wherein the plugs indicate one or more respective attachment points on the first object;

(e) dynamically creating a socket on the second object when the plug of the first object is placed proximate to the second object, wherein the sockets indicates an attachment point between the first object and the second object; and

(f) automatically coupling the second object to the first object at the attachment point.

14. (AMENDED) The article of manufacture of claim 13, wherein an appearance of the displayed second object on the monitor is modified when a type of the plug on the first object does not [substantially] match a type of the socket on the second object.